

SEQUENCE LISTING

T0440

<110> Soppet et al.

<120> G-Protein Parathyroid Hormone Receptor HLTDG74

<130> PF201D1

<140> 09/236,468

<141> 1999-01-25

<150> 08/468,011

<151> 1995-06-06

<160> 28

<170> PatentIn Ver. 2.1

<210> 1

<211> 2003

<212> DNA

<213> Homo sapiens

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| ccctgcttct | tctacagcc | gttccgggc | atg | gcc | tgg | ctg | ggg | gcg | tgc | ctc | 113 |
| | Met | Ala | Trp | Leu | Gly | Ala | Ser | Leu | | | |
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| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| cac | gtc | tgg | ggt | tgg | cta | atg | ctc | ggc | agc | tgc | ctc | ctg | gcc | aga | gcc | 161 |
| His | Val | Trp | Gly | Trp | Leu | Met | Leu | Gly | Ser | Cys | Leu | Leu | Ala | Arg | Ala | |
| 10 | | | | | 15 | | | | | | 20 | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| cag | ctg | gat | tct | gat | ggc | acc | atc | act | ata | gag | gag | cag | att | gtc | ctt | 209 |
| Gln | Leu | Asp | Ser | Asp | Gly | Thr | Ile | Thr | Ile | Glu | Glu | Gln | Ile | Val | Leu | |
| 25 | | | | | 30 | | | | | 35 | | | | | 40 | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gtg | ctg | aaa | gcg | aaa | gta | caa | tgt | gaa | ctc | aac | atc | aca | gct | caa | ctc | 257 |
| Val | Leu | Lys | Ala | Lys | Val | Gln | Cys | Glu | Leu | Asn | Ile | Thr | Ala | Gln | Leu | |
| | | | | 45 | | | | 50 | | | | | | 55 | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| cag | gag | gga | gaa | ggt | aat | tgt | ttc | cct | gaa | tgg | gat | gga | ctc | att | tgt | 305 |
| Gln | Glu | Gly | Glu | Gly | Asn | Cys | Phe | Pro | Glu | Trp | Asp | Gly | Leu | Ile | Cys | |
| | | | 60 | | | | | 65 | | | | | 70 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| tgg | ccc | aga | gga | aca | gtg | ggg | aaa | ata | tgc | gct | gtt | cca | tgc | cct | cct | 353 |
| Trp | Pro | Arg | Gly | Thr | Val | Gly | Lys | Ile | Ser | Ala | Val | Pro | Cys | Pro | Pro | |
| | | 75 | | | | | 80 | | | | | 85 | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| tat | att | tat | gac | ttc | aac | cat | aaa | gga | gtt | gct | ttc | cga | cac | tgt | aac | 401 |
| Tyr | Ile | Tyr | Asp | Phe | Asn | His | Lys | Gly | Val | Ala | Phe | Arg | His | Cys | Asn | |
| | 90 | | | | | 95 | | | | | 100 | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ccc | aat | gga | aca | tgg | gat | ttt | atg | cac | agc | tta | aat | aaa | aca | tgg | gcc | 449 |
| Pro | Asn | Gly | Thr | Trp | Asp | Phe | Met | His | Ser | Leu | Asn | Lys | Thr | Trp | Ala | |
| 105 | | | | | | 110 | | | | 115 | | | | | 120 | |



| | |
|---|------|
| aat tat tca gac tgc ctt cgc ttt ctg cag cca gat atc agc ata gga | 497 |
| Asn Tyr Ser Asp Cys Leu Arg Phe Leu Gln Pro Asp Ile Ser Ile Gly | |
| 125 130 135 | |
| aag caa gaa ttc tgt gaa cgc ctc tat gta atg tat acc gtt ggc tac | 545 |
| Lys Gln Glu Phe Cys Glu Arg Leu Tyr Val Met Tyr Thr Val Gly Tyr | |
| 140 145 150 | |
| tcc atc tct ttt ggt tcc ttg gct gtg gct att ctc atc att ggt tac | 593 |
| Ser Ile Ser Phe Gly Ser Leu Ala Val Ala Ile Leu Ile Ile Gly Tyr | |
| 155 160 165 | |
| ttc aga cga ttg cat tgc act agg aac tat atc cac atg cac tta ttt | 641 |
| Phe Arg Arg Leu His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe | |
| 170 175 180 | |
| gtg tct ttc atg ctg aga gct aca agc atc ttt gtc aaa gac aga gta | 689 |
| Val Ser Phe Met Leu Arg Ala Thr Ser Ile Phe Val Lys Asp Arg Val | |
| 185 190 195 200 | |
| gtc cat gct cac ata gga gta aag gag ctg gag tcc cta ata atg cag | 737 |
| Val His Ala His Ile Gly Val Lys Glu Leu Glu Ser Leu Ile Met Gln | |
| 205 210 215 | |
| gat gac cca caa aat tcc att gag gca act tct gtg gac aaa tca caa | 785 |
| Asp Asp Pro Gln Asn Ser Ile Glu Ala Thr Ser Val Asp Lys Ser Gln | |
| 220 225 230 | |
| tat atc ggg tgc aag att gct gtt gtg atg ttt att tac ttc ctg gct | 833 |
| Tyr Ile Gly Cys Lys Ile Ala Val Val Met Phe Ile Tyr Phe Leu Ala | |
| 235 240 245 | |
| aca aat tat tat tgg atc ctg gtg gaa ggt ctc tac ctg cat aat ctc | 881 |
| Thr Asn Tyr Tyr Trp Ile Leu Val Glu Gly Leu Tyr Leu His Asn Leu | |
| 250 255 260 | |
| atc ttt gtg gct ttc ttt tcg gac acc aaa tac ctg tgg ggc ttc atc | 929 |
| Ile Phe Val Ala Phe Phe Ser Asp Thr Lys Tyr Leu Trp Gly Phe Ile | |
| 265 270 275 280 | |
| ttg ata ggc tgg ggg ttt cca gca gca ttt gtt gca gca tgg gct gtg | 977 |
| Leu Ile Gly Trp Gly Phe Pro Ala Ala Phe Val Ala Ala Trp Ala Val | |
| 285 290 295 | |
| gca cga gca act ctg gct gat gcg agg tgc tgg gaa ctt agt gct gga | 1025 |
| Ala Arg Ala Thr Leu Ala Asp Ala Arg Cys Trp Glu Leu Ser Ala Gly | |
| 300 305 310 | |
| gac atc aag tgg att tat caa gca ccg atc tta gca gct att ggg ctg | 1073 |
| Asp Ile Lys Trp Ile Tyr Gln Ala Pro Ile Leu Ala Ala Ile Gly Leu | |
| 315 320 325 | |
| aat ttt att ctg ttt ctg aat acg gtt aga gtt cta gct acc aaa atc | 1121 |
| Asn Phe Ile Leu Phe Leu Asn Thr Val Arg Val Leu Ala Thr Lys Ile | |
| 330 335 340 | |
| tgg gag acc aat gca gtt ggg cat gac aca agg aag caa tac agg aaa | 1169 |
| Trp Glu Thr Asn Ala Val Gly His Asp Thr Arg Lys Gln Tyr Arg Lys | |
| 345 350 355 360 | |
| ctg gcc aaa tcg aca ctg gtc ctg gtc cta gtc ttt gga gtg cat tac | 1217 |
| Leu Ala Lys Ser Thr Leu Val Leu Val Leu Val Phe Gly Val His Tyr | |

| 365 | | | | | | | | | | 370 | | | | | 375 | | | | | |
|------------|-------------|-------------|-------------|-------------|------------|------------|-------------|------------|-----|-----|-----|-----|-----|-----|-----|------|--|--|--|--|
| atc | gtg | ttc | gtg | tgc | ctg | cct | cac | tcc | ttc | act | ggg | ctc | ggg | tgg | gag | 1265 | | | | |
| Ile | Val | Phe | Val | Cys | Leu | Pro | His | Ser | Phe | Thr | Gly | Leu | Gly | Trp | Glu | | | | | |
| | | | 380 | | | | | 385 | | | | | 390 | | | | | | | |
| atc | cgc | atg | cac | tgt | gag | ctc | ttc | ttc | aac | tcc | ttt | cag | ggg | ttc | ttt | 1313 | | | | |
| Ile | Arg | Met | His | Cys | Glu | Leu | Phe | Phe | Asn | Ser | Phe | Gln | Gly | Phe | Phe | | | | | |
| | | 395 | | | | | 400 | | | | | 405 | | | | | | | | |
| gtg | tct | atc | atc | tac | tgc | tac | tgc | aat | gga | gag | gtt | cag | gca | gag | gtg | 1361 | | | | |
| Val | Ser | Ile | Ile | Tyr | Cys | Tyr | Cys | Asn | Gly | Glu | Val | Gln | Ala | Glu | Val | | | | | |
| | 410 | | | | | 415 | | | | | 420 | | | | | | | | | |
| aag | aag | atg | tgg | agt | cgg | tgg | aat | ctc | tcc | gtg | gac | tgg | aaa | agg | aca | 1409 | | | | |
| Lys | Lys | Met | Trp | Ser | Arg | Trp | Asn | Leu | Ser | Val | Asp | Trp | Lys | Arg | Thr | | | | | |
| 425 | | | | | 430 | | | | | 435 | | | | | 440 | | | | | |
| ccg | cca | tgt | ggc | agc | cgc | aga | tgc | ggc | tca | gtg | ctc | acc | acc | gtg | acg | 1457 | | | | |
| Pro | Pro | Cys | Gly | Ser | Arg | Arg | Cys | Gly | Ser | Val | Leu | Thr | Thr | Val | Thr | | | | | |
| | | | | 445 | | | | 450 | | | | | | 455 | | | | | | |
| cac | agc | acc | agc | agc | cag | tca | cag | gtg | gcg | gca | gca | cac | gca | tgg | tgc | 1505 | | | | |
| His | Ser | Thr | Ser | Ser | Gln | Ser | Gln | Val | Ala | Ala | Ala | His | Ala | Trp | Cys | | | | | |
| | | | 460 | | | | | 465 | | | | | 470 | | | | | | | |
| tta | tct | ctg | gca | aag | ctg | cca | aga | tcg | cca | gca | gac | agc | ctg | aca | gcc | 1553 | | | | |
| Leu | Ser | Leu | Ala | Lys | Leu | Pro | Arg | Ser | Pro | Ala | Asp | Ser | Leu | Thr | Ala | | | | | |
| | | 475 | | | | | 480 | | | | | 485 | | | | | | | | |
| aca | tca | ctt | tac | ctg | gct | atg | tct | gga | gta | act | cag | agc | agg | act | gcc | 1601 | | | | |
| Thr | Ser | Leu | Tyr | Leu | Ala | Met | Ser | Gly | Val | Thr | Gln | Ser | Arg | Thr | Ala | | | | | |
| | 490 | | | | | 495 | | | | | 500 | | | | | | | | | |
| tca | cac | act | ctc | tcc | acg | agg | agc | aac | aag | gaa | gat | agt | ggg | agg | cag | 1649 | | | | |
| Ser | His | Thr | Leu | Ser | Thr | Arg | Ser | Asn | Lys | Glu | Asp | Ser | Gly | Arg | Gln | | | | | |
| 505 | | | | 510 | | | | | | 515 | | | | 520 | | | | | | |
| aga | gat | gat | att | cta | atg | gag | aag | cct | tcc | agg | cct | atg | gaa | tct | aac | 1697 | | | | |
| Arg | Asp | Asp | Ile | Leu | Met | Glu | Lys | Pro | Ser | Arg | Pro | Met | Glu | Ser | Asn | | | | | |
| | | | | 525 | | | | 530 | | | | | 535 | | | | | | | |
| cca | gac | act | gaa | gga | tgacaaggag | aaactgagga | tggttctctga | atggacatgt | | | | | | | | 1752 | | | | |
| Pro | Asp | Thr | Glu | Gly | | | | | | | | | | | | | | | | |
| | | | 540 | | | | | | | | | | | | | | | | | |
| gtggctgact | ttcatgggct | gggtccaatgg | ctgggttgtgt | gagaggggctt | ggctgatact | | | | | | | | | | | 1812 | | | | |
| cctatgcttg | agcaciaaagg | ctgaaaattc | agttaaggtg | ttacttaata | atagttttta | | | | | | | | | | | 1872 | | | | |
| ggctccatga | attggctcct | gtaaatacta | acgacatgaa | aatgcaagtg | tcaatggagt | | | | | | | | | | | 1932 | | | | |
| agtttattac | cttctattgg | catcaagttt | tcctctaaat | taatgtatgg | tatttgctct | | | | | | | | | | | 1992 | | | | |
| gtgattgttc | a | | | | | | | | | | | | | | | 2003 | | | | |

<210> 2
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<400> 2

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Ser | Cys | Leu | Leu | Ala | Arg | Ala | Gln | Leu | Asp | Ser | Asp | Gly | Thr | Ile |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Ile | Glu | Glu | Gln | Ile | Val | Leu | Val | Leu | Lys | Ala | Lys | Val | Gln | Cys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Leu | Asn | Ile | Thr | Ala | Gln | Leu | Gln | Glu | Gly | Glu | Gly | Asn | Cys | Phe |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | Glu | Trp | Asp | Gly | Leu | Ile | Cys | Trp | Pro | Arg | Gly | Thr | Val | Gly | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ile | Ser | Ala | Val | Pro | Cys | Pro | Pro | Tyr | Ile | Tyr | Asp | Phe | Asn | His | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Val | Ala | Phe | Arg | His | Cys | Asn | Pro | Asn | Gly | Thr | Trp | Asp | Phe | Met |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| His | Ser | Leu | Asn | Lys | Thr | Trp | Ala | Asn | Tyr | Ser | Asp | Cys | Leu | Arg | Phe |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | Gln | Pro | Asp | Ile | Ser | Ile | Gly | Lys | Gln | Glu | Phe | Cys | Glu | Arg | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Tyr | Val | Met | Tyr | Thr | Val | Gly | Tyr | Ser | Ile | Ser | Phe | Gly | Ser | Leu | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Val | Ala | Ile | Leu | Ile | Ile | Gly | Tyr | Phe | Arg | Arg | Leu | His | Cys | Thr | Arg |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Asn | Tyr | Ile | His | Met | His | Leu | Phe | Val | Ser | Phe | Met | Leu | Arg | Ala | Thr |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ser | Ile | Phe | Val | Lys | Asp | Arg | Val | Val | His | Ala | His | Ile | Gly | Val | Lys |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Leu | Glu | Ser | Leu | Ile | Met | Gln | Asp | Asp | Pro | Gln | Asn | Ser | Ile | Glu |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Thr | Ser | Val | Asp | Lys | Ser | Gln | Tyr | Ile | Gly | Cys | Lys | Ile | Ala | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Val | Met | Phe | Ile | Tyr | Phe | Leu | Ala | Thr | Asn | Tyr | Tyr | Trp | Ile | Leu | Val |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Glu | Gly | Leu | Tyr | Leu | His | Asn | Leu | Ile | Phe | Val | Ala | Phe | Phe | Ser | Asp |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Thr | Lys | Tyr | Leu | Trp | Gly | Phe | Ile | Leu | Ile | Gly | Trp | Gly | Phe | Pro | Ala |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ala | Phe | Val | Ala | Ala | Trp | Ala | Val | Ala | Arg | Ala | Thr | Leu | Ala | Asp | Ala |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Arg | Cys | Trp | Glu | Leu | Ser | Ala | Gly | Asp | Ile | Lys | Trp | Ile | Tyr | Gln | Ala |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Pro | Ile | Leu | Ala | Ala | Ile | Gly | Leu | Asn | Phe | Ile | Leu | Phe | Leu | Asn | Thr |

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<210> 4
<211> 27
<212> DNA
<213> Artificial Sequence
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<220>

<221> Primer_Bind

<223> This 3' primer sequence contains a SalI restriction enzyme site and a sequence complementary to the human PTH receptor.

<400> 4

cctcagtgtc gacttgatcat ccttcag

27

<210> 5

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<221> Primer_Bind

<223> This 5' primer contains a HindIII restriction enzyme site and a nucleotide sequence corresponding to the 5' UTR of the cDNA encoding human PTH receptor.

<400> 5

gttggcatat tggaagcttt ttgcggg

27

<210> 6

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<221> Primer_Bind

<223> This 3' primer sequence contains an XbaI restriction enzyme site, a translation stop codon, and nucleotides complementary to the human PTH receptor coding sequence.

<400> 6

cagtttctag atgtcatcct tcagtgtc

28

<210> 7

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<221> Primer_Bind

<223> This 5' primer contains a SmaI restriction enzyme site, a nucleotide sequence to provide efficient initiation of translation in eukaryotic cells, and a nucleotide sequence corresponding to the human PTH receptor cDNA, including an initiation codon.

<400> 7

tcctaccggt gccgccatca tggcctgggt ggggggcct

39

<210> 8

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<221> Primer_Bind

<223> This 3' primer contains an XbaI restriction enzyme site and a nucleotide sequence complementary to the 3' untranslated region of the PTH receptor cDNA.

<400> 8

cagtttctag atgtcatcct tcagtgtc

28

<210> 9

<211> 60

<212> PRT

<213> Homo sapiens

<400> 9

Ile Met Gln Asp Asp Pro Gln Asn Ser Ile Glu Ala Thr Ser Val Asp
1 5 10 15

Lys Ser Gln Tyr Ile Gly Cys Lys Ile Ala Val Val Met Phe Ile Tyr
20 25 30

Phe Leu Ala Thr Asn Tyr Tyr Trp Ile Leu Val Glu Gly Leu Tyr Leu
35 40 45

His Asn Leu Ile Phe Val Ala Phe Phe Ser Asp Thr
50 55 60

<210> 10

<211> 60

<212> PRT

<213> Didelphis virginiana

<400> 10

Ile Thr Glu Glu Glu Leu Arg Ala Phe Thr Glu Pro Pro Pro Ala Asp
1 5 10 15

Lys Ala Gly Phe Val Gly Cys Arg Val Ala Val Thr Val Phe Leu Tyr
20 25 30

Phe Leu Thr Thr Asn Tyr Tyr Trp Ile Leu Val Glu Gly Leu Tyr Leu
35 40 45

His Ser Leu Ile Phe Met Ala Phe Phe Ser Glu Lys
50 55 60

<210> 11

<211> 60

<212> PRT

<213> Homo sapiens

<400> 11

Lys Tyr Leu Trp Gly Phe Ile Leu Ile Gly Trp Gly Phe Pro Ala Ala
1 5 10 15

Phe Val Ala Ala Trp Ala Val Ala Arg Ala Thr Leu Ala Asp Ala Arg
20 25 30

Cys Trp Glu Leu Ser Ala Gly Asp Ile Lys Trp Ile Tyr Gln Ala Pro
35 40 45

50

Ile Leu Ala Ala Ile Gly Leu Asn Phe Ile Leu Phe
 50 55 60

<210> 12
 <211> 60
 <212> PRT
 <213> Didelphis virginiana

<400> 12
 Lys Tyr Leu Trp Gly Phe Thr Leu Phe Gly Trp Gly Leu Pro Ala Val
 1 5 10 15

Phe Val Ala Val Trp Val Thr Val Arg Ala Thr Leu Ala Asn Thr Glu
 20 25 30

Cys Trp Asp Leu Ser Ser Gly Asn Lys Lys Trp Ile Ile Gln Val Pro
 35 40 45

Ile Leu Ala Ala Ile Val Val Asn Phe Ile Leu Phe
 50 55 60

<210> 13
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 13
 Leu Asn Thr Val Arg Val Leu Ala Thr Lys Ile Trp Glu Thr Asn Ala
 1 5 10 15

Val Gly His Asp Thr Arg Lys Gln Tyr Arg Lys Leu Ala Lys Ser Thr
 20 25 30

Leu Val Leu Val Leu Val Phe Gly Val His Tyr Ile Val Phe Val Cys
 35 40 45

Leu Pro His Ser
 50

<210> 14
 <211> 52
 <212> PRT
 <213> Didelphis virginiana

<400> 14
 Ile Asn Ile Ile Arg Val Leu Ala Thr Lys Leu Arg Glu Thr Asn Ala
 1 5 10 15

Gly Arg Cys Asp Thr Arg Gln Gln Tyr Arg Lys Leu Leu Lys Ser Thr
 20 25 30

Leu Val Leu Met Pro Leu Phe Gly Val His Tyr Ile Val Phe Met Ala
 35 40 45

Thr Pro Tyr Thr
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<210> 15
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 15
 Glu Gly Asn Cys Phe Pro Glu Trp Asp Gly Leu Ile Cys Trp Pro Arg
 1 5 10 15
 Gly Thr Val Gly Lys Ile Ser Ala Val Pro Cys Pro Pro Tyr Ile Tyr
 20 25 30
 Asp Phe Asn His Lys Gly Val Ala Phe Arg His Cys Asn Pro Asn Gly
 35 40 45
 Thr Trp Asp Phe Met His Ser Leu Asn Lys Thr Trp
 50 55 60

<210> 16
 <211> 60
 <212> PRT
 <213> Didelphis virginiana

<400> 16
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 Gly Val Pro Gly Lys Val Val Ala Val Pro Cys Pro Asp Tyr Ile Tyr
 20 25 30
 Asp Phe Asn His Lys Gly Arg Ala Tyr Arg Arg Cys Asp Ser Asn Gly
 35 40 45
 Ser Trp Glu Leu Val Pro Gly Asn Asn Arg Thr Trp
 50 55 60

<210> 17
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<400> 17
 Ala Asn Tyr Ser Asp Cys Leu Arg Phe Leu
 1 5 10

<210> 18
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<400> 18
 Ala Asn Tyr Ser Glu Cys Val Lys Phe Leu
 1 5 10

<210> 19
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 <212> PRT
 <213> Homo sapiens

52

<400> 19

Lys Gln Glu Phe Cys Glu Arg Leu Tyr Val Met Tyr Thr Val Gly Tyr
 1 5 10 15

Ser Ile Ser Phe Gly Ser Leu Ala Val Ala Ile Leu Ile Ile Gly Tyr
 20 25 30

Phe Arg Arg Leu His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe
 35 40 45

Val Ser Phe Met Leu Arg Ala Thr Ser Ile Phe Val
 50 55 60

<210> 20

<211> 60

<212> PRT

<213> Didelphis virginiana

<400> 20

Glu Arg Glu Val Phe Asp Arg Leu Gly Met Ile Tyr Thr Val Gly Tyr
 1 5 10 15

Ser Ile Ser Leu Gly Ser Leu Thr Val Ala Val Leu Ile Leu Gly Tyr
 20 25 30

Phe Arg Arg Leu His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe
 35 40 45

Val Ser Phe Met Leu Arg Ala Val Ser Ile Phe Ile
 50 55 60

<210> 21

<211> 21

<212> PRT

<213> Homo sapiens

<400> 21

Lys Asp Arg Val Val His Ala His Ile Gly Val Lys Glu Leu Glu Ser
 1 5 10 15

Leu Ile Met Gln Asp
 20

<210> 22

<211> 21

<212> PRT

<213> Didelphis virginiana

<400> 22

Lys Asp Ala Val Leu Tyr Ser Gly Val Ser Thr Asp Glu Ile Glu Arg
 1 5 10 15

Ile Thr Glu Glu Glu
 20

<210> 23

<211> 59

<212> PRT

<213> Homo sapiens

<400> 23

Thr Gly Leu Gly Trp Glu Ile Arg Met His Cys Glu Leu Phe Phe Asn
1 5 10 15

Ser Phe Gln Gly Phe Phe Val Ser Ile Ile Tyr Cys Tyr Cys Asn Gly
20 25 30

Glu Val Gln Ala Glu Val Lys Lys Met Trp Ser Arg Trp Asn Leu Ser
35 40 45

Val Asp Trp Lys Arg Thr Pro Pro Cys Gly Ser
50 55

<210> 24

<211> 59

<212> PRT

<213> Didelphis virginiana

<400> 24

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Glu Val Gln Ala Glu Ile Lys Lys Ser Trp Ser Arg Trp Thr Leu Ala
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Leu Asp Phe Lys Arg Lys Ala Arg Ser Gly Ser
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<212> PRT

<213> Homo sapiens

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Leu Gln Glu Gly Glu
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<212> PRT

<213> Didelphis virginiana

<400> 26

Ala Leu Val Asp Ala Asp Asp Val Ile Thr Lys Glu Glu Gln Ile Ile
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25

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Leu Arg Val Pro Glu
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<213> Homo sapiens

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Ile Thr Leu Pro Gly Tyr Val
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<213> Didelphis virginiana

<400> 28
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1 5 10 15

His Gln Leu Pro Gly Tyr Val
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